

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1-78. (Canceled).

79. (Currently Amended) A method for scheduling transmissions of ~~a plurality of mobile terminals~~ terminal in a mobile communication system, ~~wherein each mobile terminal transmits data of at least one flow being mapped on a dedicated uplink channel to a base station,~~ the method comprising:

receiving at the base station from a radio network controller Quality of Service (QoS) attributes of a plurality of flows to be multiplexed onto a single dedicated uplink channel by ~~[[a]]~~ the mobile terminal,

~~receiving at least one a scheduling request from at least one of the mobile terminals~~ terminal at the base station, wherein the scheduling request (i) comprises an identifier identifying one flow of the plurality of flows and (ii) requests allocation of an uplink resource to the mobile terminal for transmission on transmitting data of said plurality of flows to be multiplexed onto the dedicated uplink channel ~~to the mobile terminal transmitting the respective scheduling request,~~ and

scheduling by the base station the uplink resources for transmissions of said mobile terminals on the dedicated uplink channel based on the QoS attributes related to the flow identified by the identifier resource for transmission of data of said plurality of flows to be

multiplexed onto the dedicated uplink channel by said mobile terminal, based on the identifier identifying said one flow of said plurality of flows and its related QoS attributes.

80. (Canceled).

81. (Currently Amended) The method according to claim 79, wherein the flow each flow of said plurality of flows has a priority.

82. (Currently Amended) The method according to claim 79, wherein the flow is plurality of flows are multiplexed on a MAC-d flow.

83. (Currently Amended) The method according to claim 79, wherein the QoS attributes of a respective flow of said plurality of flows comprise a transmission mode associated with the data of the flow.

84. (Currently Amended) The method according to claim 83, wherein the transmission mode indicates whether data of [[the]] a respective flow of said plurality of flows is to be transmitted applying an additional gain factor.

85. (Previously Presented) The method according to claim 79, wherein the scheduling request further comprises information on a buffer occupancy at the mobile terminal and on a transmission power at the mobile terminal.

86. (Previously Presented) The method according to claim 79, wherein the scheduling request received by the base station is transmitted via Medium Access Control (MAC) control signaling.

87. (Currently Amended) The method according to claim 79, ~~further comprising wherein scheduling by the base station comprises~~ transmitting a scheduling assignment from the base station to ~~at least one of the mobile terminals~~ terminal ~~from which a scheduling request has been received at the base station~~, wherein the scheduling assignment indicates ~~[[an]] the~~ uplink resource allocated to the mobile terminal for transmission ~~of the data of said plurality of flows to be multiplexed onto~~ [[on]] the dedicated uplink channel by said mobile terminal.

88. (Currently Amended) The method according to claim 79, wherein the QoS attributes are received from a network element terminating the radio resource control signaling of ~~at least one of the mobile terminals~~ terminal.

89. (Previously Presented) The method according to claim 88, wherein the QoS attributes are included in a configuration message.

90. (Currently Amended) The method according to claim 88, wherein the QoS attributes are received by the base station from the radio network controller element; ~~terminating the radio resource control signaling~~ in a radio link setup message or a radio link reconfiguration message.

91. (Previously Presented) The method according to claim 88, wherein the QoS attributes are received from a serving radio network controller.

92. (Currently Amended) The method according to claim 79, wherein the ~~flow is~~ plurality of flows are ~~[[is]]~~ associated to ~~at least one~~ respective radio bearer ~~bearers~~ between the mobile terminal and ~~[[the]]~~ radio network ~~element terminating the radio resource control signaling controller~~ and the method further comprises mapping QoS attributes of ~~[[a]]~~ the radio ~~bearer bearers~~ to the QoS attributes of the respective associated flow.

93. (Currently Amended) The method according to claim 92, wherein the mapping of the QoS attributes comprises taking into account uplink delays on the interface between the base station and the radio network ~~element terminating the radio resource control signaling controller~~.

94. (Canceled).

95. (Currently Amended) The method according to claim 79, wherein the identifier comprised in the scheduling request ~~comprises an identifier identifying~~ identifies the highest priority flow.

96. (Previously Presented) The method according to claim 95, wherein the highest priority flow has the highest QoS demands.

97. (Currently Amended) The method according to claim 79, wherein the QoS attributes ~~comprises~~ comprise at least one of a transfer delay, a guaranteed bit rate, a traffic handling priority, a service type identification, a traffic class and a reordering release timer of the reordering buffer in the Medium Access Control (MAC) entity.

98. (Currently Amended) The method according to claim 79, wherein the scheduling request further comprises a service type indicator indicating ~~a transmission of that data of [[the]]~~ one flow carrying a plurality of flows to be multiplexed onto the dedicated uplink channel ~~is delay-critical service on the dedicated uplink channel.~~

99. (Currently Amended) The method according to claim 79, further comprising considering a predetermined gain factor to be additionally applied to the transmission when scheduling the mobile terminal ~~from which the scheduling request has been received at the base station.~~

100. (Currently Amended) A base station for scheduling a plurality of transmissions of a plurality of mobile terminals terminal in a mobile communication system, ~~wherein each mobile terminal transmits data of at least one flow being mapped on a dedicated uplink channel to a base station,~~ said base station comprising:

a communication section adapted to receive from a radio network controller Quality of Service (QoS) attributes of a plurality of flows to be multiplexed onto a single dedicated uplink

channel by a mobile terminal, and ~~for receiving further adapted to receive~~ a scheduling request from ~~at least one of the mobile terminals~~ terminal, wherein the scheduling request (i) comprises an identifier identifying one flow of the plurality of flows and (ii) requests allocation of an uplink resource ~~for transmission on the dedicated uplink channel~~ to the mobile terminal ~~for transmitting the respective scheduling request data of said plurality of flows to be multiplexed onto the~~ dedicated uplink channel, and

a scheduling section adapted to schedule ~~the uplink resources~~ resource for transmissions ~~of said mobile terminals on~~ transmission of data of said plurality of flows to be multiplexed onto the dedicated uplink channel ~~by said mobile terminal~~, based on the identifier identifying said one flow of said plurality of flows and ~~[[the]] its related~~ QoS attributes related to the flow identified by the identifier.

101. (Canceled).

102. (Currently Amended) The base station according to claim 100, wherein ~~[[the]]~~ each flow of said plurality of flows has a priority.

103. (Currently Amended) The base station according to claim 100, wherein the ~~flow is~~ plurality of flows are multiplexed on a MAC-d flow.

104. (Currently Amended) The base station according to [[.]] claim 100, wherein the scheduling request further comprises information on a buffer occupancy and on a transmission power at the mobile terminal.

105. (Currently Amended) The base station according to claim 100, wherein the communication section is adapted to transmit a scheduling assignment to ~~at least one of the mobile terminals~~ terminal from which the scheduling request has been received, and, ~~wherein the scheduling assignment indicates [[an]] the uplink resource allocated to the mobile terminal for transmission of the data of the plurality of flows to be multiplexed onto [[on]] the dedicated uplink channel.~~

106. (Canceled).

107. (Previously Presented) The base station according to claim 106, wherein the QoS attributes are included in a configuration message.

108. (Previously Presented) The base station according to claim 106, wherein the QoS attributes are received from a serving radio network controller.

109. (Currently Amended) The base station according to claim 100, wherein the identifier comprised in the scheduling request ~~comprises an identifier identifying~~ identifies the highest priority flow.

110. (Previously Presented) The base station according to claim 109, wherein the highest priority flow has the highest QoS demands.

111. (Previously Presented) The base station according to claim 100, wherein the QoS attributes comprise at least one of a transfer delay, a guaranteed bit rate, a traffic handling priority, a service type identification, a traffic class and a reordering release timer of the reordering buffer in the Medium Access Control (MAC) entity.

112. (Currently Amended) The base station according to claim 100, wherein the scheduling request further comprises a service type indicator indicating that data of one flow of the plurality of flows to be multiplexed for transmission on the dedicated uplink channel is a transmission of data of the flow carrying a delay-critical service on the dedicated uplink channel.

113. (Currently Amended) The base station according to claim 100, wherein the scheduling unit is adapted to consider a predetermined gain factor to be additionally applied to the transmission when scheduling the mobile terminal ~~from which the scheduling request has been received.~~

114. (Currently Amended) A method for transmitting data in a mobile communication system, the method comprising:

transmitting from a mobile terminal to a base station a scheduling request, wherein the scheduling request (i) comprises a flow identifier identifying one flow of a plurality of flows to be multiplexed onto a single dedicated uplink channel and (ii) requests allocation of an uplink resource to the mobile terminal for transmission on transmitting data of said plurality of flows to be multiplexed onto the dedicated uplink channel to the mobile terminal transmitting the respective scheduling request, and, wherein the flow identifier identifies Quality of Service (QoS) attributes related to the identified flow,

receiving at the mobile terminal from the base station a scheduling assignment considering the QoS attributes related to the identified flow that indicates the uplink resource allocated to the mobile terminal for transmission of the data of the plurality of flows to be multiplexed onto the dedicated uplink channel and that considers the identifier comprised in the scheduling request identifying said one flow and its related QoS attributes,

multiplexing data of the plurality of flows to the dedicated uplink channel obtain multiplexed data, and

transmitting multiplexed data on the allocated resource on the dedicated uplink channel according to the scheduling assignment.

115. (Currently Amended) The method according to claim 114, further comprising receiving at the mobile station QoS attributes from a network element terminating the radio resource control signaling of the mobile terminal at the mobile terminal.

116. (Currently Amended) A mobile terminal for transmitting data in a mobile communication system, the mobile terminal comprising:

a transmitting section operable to transmit to a base station a scheduling request, wherein the scheduling request (i) comprises a flow identifier identifying one flow of a plurality of flows to be multiplexed onto a single dedicated uplink channel and (ii) requests allocation of an uplink resource to the mobile terminal for transmitting data of said plurality of flows to be multiplexed onto transmission on the dedicated uplink channel to the mobile terminal transmitting the respective scheduling request, and, wherein the flow identifier identifies Quality of Service (QoS) attributes related to the identified flow,

a receiving section operable to receive from the base station a scheduling assignment considering the QoS attributes related to the identified flow that indicates the uplink resource allocated to the mobile terminal for transmission of the data of the plurality of flows to be multiplexed onto the dedicated uplink channel and that considers the identifier comprised in the scheduling request identifying said one flow and its related QoS attributes, and

a multiplexer ~~operable to multiplex~~ for multiplexing data of the plurality of flows to the dedicated uplink channel obtain multiplexed data,

wherein the transmitting section is further operable to transmit data on the allocated resource on the dedicated uplink channel according to the scheduling assignment.

117. (Currently Amended) The mobile terminal according to claim 116, wherein the receiving section is further operable to receive QoS attributes from a radio network element terminating the radio resource control signaling controller of the mobile terminal.

118. (Currently Amended) A computer readable storage medium for storing instructions that when executed by a processor of a base station in a mobile communication system cause the base station to schedule transmissions by a plurality of mobile terminals, wherein each mobile terminal transmits data of at least one flow mapped on a dedicated uplink channel, by:

receiving at the base station from a radio network controller Quality of Service (QoS) attributes of a plurality of flows to be multiplexed onto a single dedicated uplink channel by a mobile terminal,

receiving a scheduling request from at least one of the mobile terminals terminal at the base station, wherein the scheduling request (i) comprises an identifier identifying one flow of the plurality of flows and (ii) requests allocation of an uplink resource to the mobile terminal for a transmission of multiplexed transmitting data of the plurality of flows to be multiplexed onto the dedicated uplink channel, and

scheduling by the base station the ~~transmissions of said mobile terminals on the dedicated uplink channel based on the identifier and the QoS attributes related to the flow identified by the identifier~~ the uplink resource for transmission of data of said plurality of flows to be multiplexed onto the dedicated uplink channel by said mobile terminal based on the identifier identifying said one flow of said plurality of flows and its related QoS attributes.

119. (Currently Amended) A computer readable storage medium for storing instructions that when executed by a processor cause a mobile terminal to transmit multiplexed data in a mobile communication system, by:

transmitting from the mobile terminal to a base station a scheduling request, wherein the scheduling request (i) comprises a flow identifier identifying one flow of a plurality of flows to be multiplexed onto a single dedicated uplink channel and (ii) requests allocation of an uplink resource to the mobile terminal for transmission on transmitting data of said plurality of flows to be multiplexed onto the dedicated uplink channel ~~to the mobile terminal transmitting the~~ respective scheduling request, ~~and~~ wherein the flow identifier identifies Quality of Service (QoS) attributes related to the identified flow,

receiving at the mobile terminal from the base station a scheduling assignment ~~from the base station~~, ~~and considering the QoS attributes related to the identified flow~~ that indicates the uplink resource allocated to the mobile terminal for transmission of the data of the plurality of flows to be multiplexed onto the dedicated uplink channel and that considers the identifier comprised in the scheduling request identifying said one flow and its related QoS attributes,

multiplexing data of the plurality of flows to the dedicated uplink channel obtain multiplexed data, and

transmitting multiplexed data on the allocated resource on the dedicated uplink channel ~~according to the scheduling assignment.~~

120. (New) The method according to claim 79, wherein the scheduling request requests allocation of an uplink resource to the mobile terminal for transmitting data of said plurality of flows multiplexed to a protocol data unit (PDU) on the dedicated uplink channel.

121. (New) The method according to claim 120, wherein the PDU is a MAC-e PDU.

122. (New) The base station according to claim 100, wherein the scheduling request requests allocation of an uplink resource to the mobile terminal for transmitting data of said plurality of flows multiplexed to a protocol data unit (PDU) on the dedicated uplink channel.

123. (New) The base station according to claim 122, wherein the PDU is a MAC-e PDU.

124. (New) The method according to claim 113, wherein the scheduling request requests allocation of an uplink resource to the mobile terminal for transmitting data of said plurality of flows multiplexed to a protocol data unit (PDU) on the dedicated uplink channel.

125. (New) The method according to claim 120, wherein the PDU is a MAC-e PDU.

126. (New) The mobile terminal according to claim 116, wherein the scheduling request requests allocation of an uplink resource to the mobile terminal for transmitting data of said plurality of flows multiplexed to a protocol data unit (PDU) on the dedicated uplink channel.

127. (New) The mobile terminal according to claim 125, wherein the PDU is a MAC-e PDU.

128. (New) The computer readable storage medium according to claim 118, wherein the scheduling request requests allocation of an uplink resource to the mobile terminal for

transmitting data of said plurality of flows multiplexed to a protocol data unit (PDU) on the dedicated uplink channel.

129. (New) The computer readable storage medium according to claim 128, wherein the PDU is a MAC-e PDU.